Anthem/Quest Diagnostics/CalPERS Colorectal Cancer Screening Pilot Project Report
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Background

At a presentation to the Health Benefits Committee (HBC) in April 2009, California Public Employees' Retirement System (CalPERS) staff noted that although the PERS Choice and PERSCare self-funded PPO plans had colorectal cancer screening rates above the national averages, the absolute figures were only 46%-47%. The figures indicated that over half of PPO members for whom screening procedures such as annual fecal occult blood testing are recommended were not receiving such screening.

In January 2010, CalPERS staff approved a request by Anthem Blue Cross (Anthem) and Quest Diagnostics for a pilot program to encourage appropriate PPO members to take actions through diagnostic testing for early detection of colorectal cancer. Anthem arranged to have the cost of the program covered through claims and the members' preventive care benefit.

Methods

The colorectal cancer screening test selected was the InSure® FIT™ (Fecal Immunochemical Test) manufactured by Enterix, a Quest Diagnostics company.[1] The sample for the InSure® FIT™ is collected by the member in his/her home. With a long-handled brush, participants gently brush the surface of the stool, collect the surrounding toilet water, and dab the sample onto the test card. These steps are followed again to collect a second sample. The participant then sends the test cards in the supplied envelope to Quest Diagnostics for testing.

Advantages of the InSure® FIT™ system over standard fecal occult blood tests (FOBTs) include:

- FOBTs require dietary restrictions; for example, participants cannot ingest red meat (e.g., beef, lamb, and liver), non-steroidal anti-inflammatory drugs such as aspirin and ibuprofen, or vitamin C prior to a FOBT. In contrast, InSure® FIT™ is designed to detect only human hemoglobin, and therefore has "no dietary or medicinal restrictions."
- Collection of samples is easier for InSure® FIT™ than for FOBTs. InSure® FIT™ requires a smaller amount of stool, and InSure® FIT™ allows the sample to be

[1] InSure® Fecal Immunochemical Test (FIT): Home Page. At http://www.insuretest.com.

collected from stool that is in water (unlike FOBTs which require stool that has not touched water).

- One randomized study determined that participation (return of completed sample kits) for InSure® FIT™ was higher than participation using a FOBT or using a FIT requiring a spatula instead of a brush.[2]

A 2006 study found that InSure® FIT™ is more sensitive than a FOBT for the detection of cancers and adenomas.[3] In 2008, the American Cancer Society and two other organizations concluded that "annual screening with FIT... is an acceptable option for colorectal screening in average-risk adults aged 50 years and older."[4] A 2008 paper for the U.S. Preventive Services Task Force stated "Fecal tests with better sensitivity and similar specificity are reasonable substitutes for traditional fecal occult blood testing."[5] In 2009, the American College of Gastroenterology (ACG) released new guidelines for colorectal cancer screening.[6] ACG divided colorectal screening tests into "cancer prevention tests" and "cancer detection tests." The preferred colorectal cancer prevention test was colonoscopy every 10 years; the preferred cancer detection test was annual FIT.

Table 1 gives the timeline of the project. Beginning in late May 2010, CalPERS self-funded PPO members between the ages of 50 and 65 for whom colorectal cancer screening procedures are recommended were sent a letter providing program information and encouraging them to request a test kit by mail. The sample excluded all members who had a diagnosis of colon cancer or who had been screened in the last year according to ACG guidelines. Claims data were used to identify members eligible for the pilot.

If a member requested a test kit, Quest Diagnostics mailed him/her one. Once the member collected the sample, he/she was required to mail the kit to a Quest Diagnostics designated lab for testing. Reminder postcards were mailed to those who had received a kit but had not returned it.

All members participating in the program received their results by mail and members with a positive test result were also contacted by a physician to encourage the necessary follow-ups with their own personal physician.

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[2] Cole SR, Young GP, Esterman A, Cadd B, Morcom J. A randomised trial of the impact of new faecal haemoglobin test technologies on population participation in screening for colorectal cancer. J Med Screen. 2003;10(3):117-22.

[3] Smith A, Young GP, Cole SR, Bampton P. Comparison of a brush-sampling fecal immunochemical test for hemoglobin with a sensitive guaiac-based fecal occult blood test in detection of colorectal neoplasia. Cancer 2006 Nov 1;107(9):2152-9. At http://onlinelibrary.wiley.com/doi/10.1002/cncr.22230/pdf.

[4] Levin B, et al. Screening and surveillance for the early detection of colorectal cancer and adenomatous polyps, 2008: a joint guideline from the American Cancer Society, the US Multi-Society Task Force on Colorectal Cancer, and the American College of Radiology. CA Cancer J Clin 2008 May-Jun;58(3):130-60. At http://caonline.amcancersoc.org/cgi/content/full/CA.2007.0018v1.

[5] Whitlock EP, Lin JS, Liles E, Beil TL, Fu R. Screening for colorectal cancer: a targeted, updated systematic review for the U.S. Preventive Services Task Force. Ann Intern Med 2008 Nov 4;149(9):638-58. At http://www.annals.org/content/149/9/638.full.pdf.

[6] Rex DK, et al. American College of Gastroenterology guidelines for colorectal cancer screening 2009. Am J Gastroenterol. 2009 Mar;104(3):739-50. Erratum in: Am J Gastroenterol. 2009 Jun;104(6):1613.

Table 1. Project Timeline

	05/07/10	05/14/10	05/21/10	05/28/10	06/04/10	06/11/10	06/18/10	07/02/10	07/09/10	07/16/10	07/22/10	07/23/10	07/30/10	08/13/10	08/25/10	09/22/10	11/01/10
Introduction letter mailed to members	x	x	x	x	x	x	x										
Last day members could request a kit											x						
Kits were mailed to members				x		x			x			x					
Reminder cards were mailed to members who requested a kit, but did not return a kit								x		x			x	x	x		
Target date noted on the reminder cards for members to send in the kits																x	
Close of the pilot (i.e., kits received after this date were tested and billed, but were not part of the project)																	x

To determine reasons for not participating, two surveys were sent to members in November 2010. The first survey consisted of a postcard sent to a sample of 3000 members who received the letter for the kit but who did not request a kit. Of the postcards sent, 209 (7.0%) were returned. The second survey consisted of an electronic SurveyMonkey questionnaire for which a link was sent to members who provided an e-mail address and who requested a kit; this survey contained questions concerning reasons that members either returned or did not return their kits for testing. Of the approximately 1,300 members who were emailed the SurveyMonkey link, 352 (27%) filled out the survey. In both surveys, members were invited to submit narrative comments.

Results

Letters were sent to 69,805 members. Of these, 6,644 (9.5%) requested and received test kits. Of the 6,644 participants to whom kits were mailed, Quest Diagnostics received and tested 3,626 (54.6%, Table 2). Participation rates increased with age; women participated at a higher rate than men.

Of the 3,626 kits tested, 69 (1.9%) tested positive. This contrasted with Quest Diagnostics data of findings from employers and health plans, in which an average of 4.3% of kits tested were positive.

Among members who did not request a kit, the most common reason cited was "I'm current on my colorectal cancer screening," followed by "I put it off (didn't get around to it)" (Table 3). Among members who requested a kit but did not return it for testing, "I put it off (didn't get around to it)" was the most common reason (Table 4).

Table 2. Eligible Participants Who Received a Kit, Percent Tested, and Percent Positive, by Gender and Age

Gender	Age	Eligible Participants	KITs Tested	Tested Rate	Total Positive	Positive Rate	
						Company	Database Average
Women	18-49	0	0	0.0%	0	0.0%	3.1%
	50-54	817	405	49.6%	4	1.0%	3.4%
	55-59	1,270	692	54.5%	14	2.0%	3.6%
	60-64	1,425	882	61.9%	19	2.2%	4.0%
	65-69	221	152	68.8%	3	2.0%	4.3%
	70+	0	0	0.0%	0	0.0%	6.1%
Women	*Total*	*3,733*	*2,131*	*57.1%*	*40*	*1.9%*	*3.7%*
Men	18-49	0	0	0.0%	0	0.0%	3.5%
	50-54	552	259	46.9%	3	1.2%	4.0%
	55-59	986	479	48.6%	10	2.1%	4.8%
	60-64	1,174	645	54.9%	12	1.9%	5.4%
	65-69	198	111	56.1%	4	3.6%	6.3%
	70+	1	1	100.0%	0	0.0%	6.9%
Men	*Total*	*2,911*	*1,495*	*51.4%*	*29*	*1.9%*	*4.9%*
All	18-49	0	0	0.0%	0	0.0%	3.2%
	50-54	1,369	664	48.5%	7	1.1%	3.7%
	55-59	2,256	1,171	51.9%	24	2.0%	4.1%
	60-64	2,599	1,527	58.8%	31	2.0%	4.7%
	65-69	419	263	62.8%	7	2.7%	5.4%
	70+	1	1	100.0%	0	0.0%	6.6%
All	*Total*	*6,644*	*3,626*	*54.6%*	*69*	*1.9%*	*4.3%*

Table 3. Survey of Members Who Did Not Request a Kit: Responses to One Question

"Why didn't you participate in the recent CalPERS/Anthem Colorectal Cancer Screening Program?"	Percent	Count
I'm current on my colorectal cancer screening.	47.1%	97
I put it off (didn't get around to it).	14.6%	30
I was concerned about being responsible for payment.	7.8%	16
My doctor didn't say I needed it.	7.3%	15
I was not interested in being screened.	2.9%	6
I don't have a regular doctor.	1.9%	4
Other	32.0%	66

Table 4. Survey of Members Who Requested Kits: Responses to One Question

"If you didn't return your InSure Colorectal Cancer Screening Kit, what is the main reason why?"	Percent	Count
I put it off (didn't get around to it).	32.4%	11
I was screened through a different source.	17.6%	6
I was uncomfortable during the collection.	8.8%	3
I lost my kit.	8.8%	3
I was concerned about being responsible for payment.	5.9%	2
Other	26.5%	9

Narrative comments from members completing surveys were largely complimentary of the project and included:

- "Because the screening came back positive, I am now scheduled for a colonoscopy...."
- "Wanted to participate as a way to show Anthem that patients want and need this sort of self-care program, where we can take responsibility for our health along with our care providers. Hope you'll keep it going! :)"
- "My Doctor was very pleased that I had taken this particular test."
- "I think this service offered by my insurance company was a very smart move - not only in helping to curb rising costs of health care, but also in making it very easy for customers to be compliant with recommended health screening in an affordable manner."
- "The test was just a little intimidating at first, but once I sat down and read the instructions all the way through, I took the first step and it wasn't bad at all. Thank you very much for the convenience and privacy of that test."

Discussion, Next Steps, and Recommendations

Overall the pilot was considered a success, with members being motivated to receive necessary and important preventive care. Although the main purpose of the program was to improve the lives of the members CalPERS serves, we note that a 2009 study[7] concluded that the increasing

[7] Lansdorp-Vogelaar I, van Ballegooijen M, Zauber AG, Habbema JD, Kuipers EJ. Effect of rising chemotherapy costs on the cost savings of colorectal cancer screening. J Natl Cancer Inst. 2009 Oct 21;101(20):1412-22. At http://jnci.oxfordjournals.org/content/101/20/1412.full.

use of newer, more expensive chemotherapies for colorectal cancer is causing colorectal cancer screening by fecal immunochemical tests to be cost saving. Furthermore, a 2010 study estimated that annual fecal immunochemical tests would save 68 Canadian dollars in health care costs over the lifetime of each person screened because of the lowered costs of managing colorectal cancer.[8]

Limitations of this project included:

- The data analysis by Anthem to identify members could have been more refined as some members transitioning into Medicare Supplemental plans were inadvertently solicited.
- Based on the survey results, it is possible that some members who were actually compliant with colorectal cancer screening guidelines were included in the sample.
- The uptake of screening was relatively low at 5.2% (i.e., 3,626 tests among 69,805 eligible members). However, this was comparable to the uptake in two studies identified in a comprehensive 2010 review of the literature on colorectal cancer screening conducted for the Agency for Healthcare Research and Quality. In the two studies, mailing FOBT test kits to patients increased screening rates by 5.9% (from 38.1% to 44.0%) or by 5.4%-6.3% (from 7.8% to either 13.2% or 14.1%).[9]

Anthem continues to evaluate the success of the program, with emphases on establishing the long term implications of the intervention, on formulating methods to increase participation, and on expanding application of the findings with other interested parties. Evaluation steps include:

- Monitoring of colonoscopy and related data for members in the pilot project. For example, there is a question of what percentage of the 63,161 members who did not request a test kit might have received colorectal cancer screening independent of the project during 2010.
- Review of data such as the Healthcare Effectiveness Data and Information Set (HEDIS) to monitor overall plan performance. It is possible that the project has led to increased scores on the HEDIS measure "Colorectal Cancer Screening"; however, HEDIS data for measurement year 2010 will not be available until mid-2011.

In addition to its further evaluation of the pilot, Anthem will support CalPERS's consideration of expansion of the program to its entire population.

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[8] For example, see: Heitman SJ, Hilsden RJ, Au F, Dowden S, Manns BJ. Colorectal cancer screening for average-risk North Americans: an economic evaluation. PLoS Med. 2010 Nov 23;7(11):e1000370. At http://www.plosmedicine.org/article/info%3Adoi%2F10.1371%2Fjournal.pmed.1000370.

[9] Holden DJ, Harris R, Porterfield DS, Jonas DE, Morgan LC, Reuland D, Gilchrist M, Viswanathan M, Lohr KN, Lyda-McDonald B. Enhancing the use and quality of colorectal cancer screening. Evidence Report/Technology Assessment No.190. AHRQ Publication No. 10-E-002. Rockville, MD: Agency for Healthcare Research and Quality, February 2010. At http://www.ncbi.nlm.nih.gov/books/n/erta190/pdf/TOC.pdf.